211. CYMBOPOGON Sprengel, Pl. Min. Cogn. Pug. 2: 14. 1815.

香茅属 xiang mao shu

Chen Shouliang (陈守良); Sylvia M. Phillips

Perennial, rarely annual. Culms often tall, robust. Leaf blades aromatic, filiform to broadly linear; ligule scarious. Inflorescence a dense spathate compound panicle, each ultimate spatheole subtending a pair of short racemes on a short peduncle; spatheoles boat-shaped; each raceme borne on a short, flattened raceme base, often deflexed at maturity, lower raceme with one basal pair of homogamous spikelets below the fertile pairs; rachis internodes and pedicels linear, white-ciliate on margins, sometimes pedicel of homogamous pair swollen and fused to adjacent internode. Sessile spikelet dorsally compressed; callus obtuse, shortly bearded, inserted into internode apex; lower glume papery, flat or concave, sometimes grooved or wrinkled, 2-keeled, keels lateral, often winged above middle, with or without intercarinal veins; upper glume boat-shaped, awnless; lower floret reduced to a hyaline lemma; upper lemma narrowly oblong, usually 2-lobed to near middle, lobes slender, ciliate, awned from sinus, occasionally subentire and awnless; awn geniculate, sometimes weakly, short, glabrous. Pedicelled spikelet male or sterile, narrowly lanceolate, awnless. x = 10, 20, 40, 60

About 70 species: tropics and subtropics of Africa, Asia, and Australia, predominantly in Asia; introduced in tropical America; 24 species (seven endemic, up to five introduced) in China.

Cymbopogon, with its inserted callus but frequently deflexed raceme bases, provides a link between Andropogon and Hyparrhenia, although its aromatic leaves distinguish it from both these genera. Many of the species are both variable and intergrading, based on inconstant characters, leading to much taxonomic difficulty. Specimens showing intermediate or extreme characteristics are common.

Several species are cultivated commercially for the aromatic oils that are distilled from their leaves. The oils are often lemon scented and are used as perfume. Some species are also used medicinally and in cooking. Oil of citronella is used as an insect repellant.

used as perfume. Some species are also used medicinary and in cooking. On or entoned is used as an insect repending.	
1a. Rachis internodes and pedicels villous on margins and back with long silky hairs surrounding and obscuring spikelets	. 1. C. jwarancusa
1b. Rachis internodes and pedicels ciliate on margins, back glabrous or pubescent, hairs shorter than spikelets.	
2a. Lower glume of sessile spikelet flat with a slitlike median groove below middle (appearing as a line or	
keel on inside).	
3a. Pedicel of homogamous spikelet pair linear to slightly cuneate, not fused to adjacent rachis	
internode	2. C. mekongensis
3b. Pedicel of homogamous spikelet pair swollen, barrel-shaped, fused to adjacent rachis internode at base.	_
4a. Culms up to 1 m; leaf blades 0.5–1 cm wide, base rounded	3. C. annamensis
4b. Culms up to 3 m; leaf blades 1–3 cm wide, base cordate, often amplexicaul	4. C. martini
2b. Lower glume of sessile spikelet almost flat to deeply concave, the depression uniformly rounded.	
5a. Homogamous spikelet pair reduced or absent; pedicelled spikelet small, reduced to barren glumes.	
6a. Racemes not deflexing at maturity; spatheoles narrowly lanceolate, 2–2.5 cm	C. liangshanensis
6b. Racemes deflexing at maturity; spatheoles linear, 1.2–1.5 cm	6. C. minor
5b. Homogamous spikelet pair well developed; pedicelled spikelet well developed, often staminate.	
7a. Lower glume of sessile spikelet with keels rounded in lower half, wingless or almost so.	
8a. Raceme bases slender, unequal; racemes often more than 2 per spatheole 2. Andropogon m	unroi (see p. 623)
8b. Raceme bases flat, subequal; racemes always paired.	
9a. Lower glume of sessile spikelet deeply concave, depression with a prominent swelling at	
base	7. C. gidarba
9b. Lower glume of sessile spikelet shallowly concave to almost flat, without a swelling at	
base	8. C. pospischilii
7b. Lower glume of sessile spikelet with keels sharp throughout, narrowly to broadly winged.	
10a. Sessile spikelet awnless or with short awn included within spikelet; cultivated plants.	
11a. Sessile spikelet 5–6 mm; lower glume linear-lanceolate, ca. 0.7 mm wide	9. <i>C. citratus</i>
11b. Sessile spikelet 3–5 mm; lower glume elliptic-oblong, 1–1.2 mm wide.	
12a. Inflorescence densely congested; leaf blades tough, scabrid, drooping for 1/3 of the	
length	10. C. nardus
12b. Inflorescence lax, branches spreading; leaf blades softer, smooth, drooping for	
2/3 of their length	11. C. winterianus
10b. Sessile spikelet with exserted geniculate awn; wild plants (<i>C. flexuosus</i> also cultivated).	
13a. Culms slender to moderately robust, up to 1.5 m tall, 2–5 mm in diam.; spathate panicle	:
1–3-times branched.	10 C 1: 4
14a. Sessile spikelet (6–)7–8 mm; leaf blades filiform, 1.5–3 mm wide	12. C. distans
14b. Sessile spikelet 3.5–6.3 mm; leaf blades linear, 2–7 mm wide.	
15a. Lower glume of sessile spikelet 5–7-veined between keels, obviously	12 C marris
transversely wrinkled	13. C. nervosus

15b. Lower glume of sessile spikelet 2–5-veined between keels; smooth or slightly			
wrinkled. 16a. Old basal leaf sheaths curling, reddish brown or orange inside; racemes			
1–2 cm.			
17a. Racemes 1–1.5 cm; sessile spikelet narrowly lanceolate-oblong,			
3.5–4.5 mm, wings on keels 0.15–0.25 mm; awn 7–10 mm			
17b. Racemes 1.5–2 cm; sessile spikelet narrowly obovate, 4.5–6 mm,			
wings on keels 0.25–0.45 mm wide; awn 10–12 mm			
16b. Old basal leaf sheaths neither noticeably curling nor reddish inside;			
racemes 1.7–3 cm.			
18a. Racemes 2–3 cm; sessile spikelet ca. 6 × 1.3 mm 16. <i>C. tungmaiensis</i>			
18b. Racemes 1.7–2 cm; sessile spikelet ca. 5 × 1 mm			
13b. Culms robust, up to 3 m tall, 5–10 mm in diam.; spathate panicle repeatedly branched.			
19a. Sessile spikelet 5–9 mm (if less than 5.5 mm, lower glume clearly concave).			
20a. Sessile spikelet 5–6 mm; lower glume clearly concave in lower 2/3, not			
wrinkled; wings on keels 0.15–0.35 mm			
wrinkled; wings on keels 0.3–0.5 mm.			
21a. Compound panicle very large, open, drooping; racemes 3–4 cm,			
yellow-green; sessile spikelet 7–9 mm			
21b. Compound panicle narrow, erect, subdense; racemes 2–2.5 cm,			
purple; sessile spikelet 5.5–7 mm			
19b. Sessile spikelet 3.5–5.5 mm.			
22a. Racemes 1–1.3 cm; sessile spikelet 3.5–4 mm; lower glume 0–2-veined			
between keels; awn 6–8 mm			
22b. Racemes 1–2.5 cm; sessile spikelet 4–5 mm; lower glume 3–7-veined			
between keels; awn 8–12 mm.			
23a. Panicle effuse, grayish green, branches with raceme clusters long, lax, drooping; lower glume of sessile spikelet obscurely 3-veined between			
keels, narrowly winged (wings 0.1 mm or less)			
23b. Panicle not effuse, often purplish, branches with raceme clusters dense,			
erect; lower glume of sessile spikelet distinctly 5(–7)-veined between			
keels, winged (wings more than 0.1 mm).			
24a. Leaf blades 0.7–1 cm wide; leaf sheath auricles up to 0.6 mm 23. C. khasianus			
24b. Leaf blades ca. 1.6 cm wide; leaf sheath auricles ca. 10 mm 24. C. auritus			
caranausa (Janas) Sabultas Mant 2: 459 1a Culms un to 150 am tall: liquid			

1. Cymbopogon jwarancusa (Jones) Schultes, Mant. 2: 458. 1824.

辣薄荷草 la bo he cao

Perennial, shortly rhizomatous; old basal sheaths papery, ribbonlike, often spirally curling. Culms densely tufted, moderately robust to wiry, 0.2-1.5 cm tall, lower internodes short, crowded. Leaf sheaths smooth, glabrous, congested and overlapping at base; leaf blades glaucous, involute or flat, 20–50 \times 0.1-0.5 cm, glabrous, apex filiform; ligule 0.5-4 mm. Spathate compound panicle narrow, 10-40 cm; spatheoles in dense woolly clusters, straw-colored or becoming purplish, 1-2 cm; racemes 1-1.8(-2.2) cm; rachis internodes and pedicels ca. 2 mm, densely white-villous, hairs as long as spikelets; pedicel of homogamous pair not swollen. Sessile spikelet narrowly lanceolate, 4.5–5.5 mm; lower glume thin, concave, glabrous, sharply 2-keeled, keels scabrid upward, not winged, 0(-3)-veined between keels; upper lemma 2-lobed; awn almost straight, column and limb weakly differentiated, 0.5-1 cm. Pedicelled spikelet 5–6 mm. Fl. and fr. Mar–May and Jul–Aug. 2n = 20.

Mountain slopes, dry valleys. SW Sichuan, Xizang, Yunnan (Yuanmou) [Afghanistan, Bhutan, N India, Nepal, Pakistan; SW Asia (Iran, Iraq, Oman)].

1a.	Culms up to 150 cm tall; ligule	
	0.5–1 mm	1a. subsp. jwarancusa
1b.	Culms 20–40 cm tall; ligule	
	(1–)2–4 mm	1b. subsp. olivieri

1a. Cymbopogon jwarancusa subsp. jwarancusa

辣薄荷草(原亚种) la bo he cao (yuan ya zhong)

Andropogon jwarancusa Jones, Asiat. Res. 4: 109. 1795.

Culms up to 150 cm tall; old basal leaf sheaths often spirally curling; ligule 0.5–1 mm.

Grassy slopes, dry valleys; below 1400 m. SW Sichuan, Xizang, Yunnan (Yuanmou) [Afghanistan, Bhutan, N India, Nepal, Pakistan; SW Asia (Iran)].

This subspecies is used medicinally.

1b. Cymbopogon jwarancusa subsp. olivieri (Boissier) Soenarko, Reinwardtia 9: 307. 1977.

西亚香茅 xi ya xiang mao

Andropogon olivieri Boissier, Diagn. Pl. Orient., ser. 1, 5: 76. 1844; A. ariani Edgeworth; Cymbopogon ariani (Edgeworth) Aitchison; C. ladakhensis B. K. Gupta.

Culms 20–40 cm tall; old basal sheaths only infrequently curling; ligule (1–)2–4 mm.

Mountain slopes, dry valleys; 2900–3500 m. W Xizang, Yunnan (Yuanmou) [Afghanistan, NW India, Pakistan; SW Asia (Iran, Iraq, Oman)].

This taxon is somewhat smaller than subsp. *jwarancusa*, and its distribution extends further westward from Pakistan. The basal parts are required for a positive identification. It has been confused in the past with *Cymbopogon schoenanthus* (Linnaeus) Sprengel, from Africa and Arabia, which has a swollen lowermost pedicel fused to the adjacent internode.

2. Cymbopogon mekongensis A. Camus, Bull. Mus. Natl. Hist. Nat. 26: 563. 1920.

青香茅 qing xiang mao

Perennial. Culms densely tufted, wiry, 30–80 cm tall. Leaf sheaths glabrous; leaf blades linear, glaucous, 10–25 × 0.2–0.6 cm, glabrous, base narrowly rounded, apex filiform; ligule 0.7–3 mm. Spathate compound panicle narrow, 10–30 cm, spathes densely clustered; spatheoles reddish brown, 1.4–2 cm; racemes reddish brown, 0.7–1.4 cm; rachis internodes and pedicels ca. 1.5 mm, ciliate on margins; pedicel of homogamous pair linear to columnar, not or only very slightly swollen, not fused to internode. Sessile spikelet oblanceolate, 3–4.3 mm; lower glume flat, deeply grooved below middle (appearing as a line or keel on inside), keels broadly winged above middle, veinless or obscurely 2-veined between keels; upper lemma deeply 2-lobed; awn 1.1–1.5 cm. Pedicelled spikelet 3–4 mm. Fl. and fr. Jul-Sep.

Roadsides, hill slopes. Guangdong, Guangxi, Guizhou, Hainan, Hunan, Sichuan, Yunnan, Zhejiang [Laos, Thailand, Vietnam].

Cymbopogon mekongensis is very close to C. caesius (Nees ex Hooker & Arnott) Stapf, which occurs down the eastern side of Africa through Arabia to Pakistan and in S India and Sri Lanka. Cymbopogon caesius differs by the markedly swollen, barrel-shaped pedicel of the homogamous spikelet pair, which is fused to the swollen adjacent internode. It also tends to have greenish yellow rather than reddish inflorescences.

3. Cymbopogon annamensis (A. Camus) A. Camus, Bull. Mus. Natl. Hist. Nat. 26: 563. 1920.

圆基香茅 yuan ji xiang mao

Cymbopogon martini (Roxburgh) Will. Watson var. annamensis A. Camus, Bull. Mus. Natl. Hist. Nat. 25: 670. 1919; C. bassacensis A. Camus.

Perennial. Culms tufted, wiry, up to 1 m tall. Leaf sheaths glabrous; leaf blades linear or linear-lanceolate, glaucous, 10–30 × 0.5–1 cm, glabrous, margin scabrid, base rounded, apex filiform; ligule 0.5–1.5 mm. Spathate panicle narrow, lax, 6–20 cm; spatheoles reddish brown, 2–2.5 cm; racemes reddish brown to purplish, 1.5–2 cm; rachis internodes and pedicels white-ciliate on margins; pedicel of homogamous pair swollen, barrel-shaped or broadly columnar, shiny, fused to internode at base. Sessile spikelet oblanceolate, 3.6–4.5 mm; lower glume flat, deeply grooved below middle (appearing as a line or keel on inside), keels winged above middle, veinless or obscurely 2-

veined between keels; upper lemma deeply 2-lobed; awn ca. 1.6 cm. Pedicelled spikelet 3.5–4 mm.

Open forests, forest margins. Yunnan [Laos, Thailand, Vietnam].

This species is taken here in a broad sense to include all slender, narrow-leaved specimens from S China and Indochina with a flat, grooved, winged sessile spikelet and a swollen lowermost pedicel. The differences from *Cymbopogon caesius* (Nees ex Hooker & Arnott) Stapf, from E Africa to India, are very slight. *Cymbopogon caesius* tends to have a longer ligule, to 4 mm, and paler inflorescences. Likewise, *C. annamensis* hardly differs from *C. mekongensis*, except in the swollen lowermost pedicel.

4. Cymbopogon martini (Roxburgh) Will. Watson in E. T. Atkinson, Himalayan Districts N.W. Prov. India, 392. 1882.

鲁沙香茅 lu sha xiang mao

Andropogon martini Roxburgh, Fl. Ind. 1: 280. 1820; A. schoenanthus Linnaeus var. martini (Roxburgh) J. D. Hooker.

Perennial from a short woody rootstock. Culms tufted, up to 3 m tall, lower nodes often swollen, mealy. Leaf sheaths glabrous; leaf blades lanceolate, usually glaucous below, dark green above, up to $50 \times 2-3$ cm, glabrous, base cordate, often amplexicaul, apex filiform; ligule 2–4 mm. Spathate panicle narrow, dense, erect, 20–30 cm; spatheoles green becoming reddish, 2–4 cm; racemes 1.5–2 cm; rachis internodes and pedicels ciliate on margins, back sometimes pubescent; pedicel of homogamous pair swollen, barrel-shaped, shiny, fused to internode at base. Sessile spikelet oblong, 3.5–4.5 mm; lower glume flat, deeply grooved below middle (appearing as a line or keel on inside), keels winged above middle, veinless or 2-veined between keels; upper lemma 2-lobed; awn 1.4–1.8 cm. Pedicelled spikelet 3.5–4 mm. Fl. and fr. Jul–Oct. 2n = 20, 40.

Grassy slopes; ca. 1000 m. Sichuan, Yunnan [native to India].

This grass is native to India, but is cultivated elsewhere in the tropics for its oils. Two forms can be distinguished in the field, each with a different oil content, but the habit differences are not evident in herbarium material. The cultivar 'Motia' yields palmerosa oil and 'Sofia' yields ginger-grass oil.

The name "Cymbopogon lanceifolium L. Liu" (Fl. Reipubl. Popularis Sin. 10(2): 194. 1997) was not validly published because no Latin description was provided. It appears to be based on a specimen of *C. martini* with a rather lax panicle.

5. Cymbopogon liangshanensis L. Liu ex S. M. Phillips & H. Peng, Novon 15: 471, 2005.

凉山香茅 liang shan xiang mao

Perennial. Culms solitary or in small tufts, slender, 50–110 cm tall. Leaf sheaths glabrous; leaf blades linear, glaucous, 20–30 × 0.3–0.5 cm, slightly scaberulous, glabrous, lower blades narrowed almost to midrib toward base; ligule 1.5–2.5 mm. Spathate panicle open, 30–40 cm, branches slender, laxly ascending; spatheoles narrowly lanceolate, greenish brown, 2–2.5 cm; racemes green, 1.5–1.8 cm, raceme bases linear, not deflexing; homogamous pair reduced, vestigial or often absent; rachis internodes and pedicels slenderly linear, margins ciliate with ca. 0.5 mm hairs increasing to 1.5 mm at apex, apices expanded,

cupular, scarious, toothed. Sessile spikelet narrowly elliptic-oblong, 3.7–4 mm; lower glume shallowly concave below middle, sharply keeled, keels scabrid, wingless, 2–4-veined between keels above middle; upper lemma 2-lobed; awn 1.3–1.5 cm. Pedicelled spikelet narrow, 2–3 mm, reduced to the glumes, lower glume enclosing a much smaller upper glume. Fl. and fr. Jul–Sep.

• Mountain slopes. SW Sichuan.

This species resembles *Andropogon* in its non-deflexing racemes and the lack of an obvious homogamous spikelet pair, although this is usually present as a vestige. It is not known whether the leaves are aromatic. The enlarged, toothed, cupular tips to the raceme bases, raceme internodes, and pedicels are a distinctive character of this species.

6. Cymbopogon minor B. S. Sun & R. Zhang ex S. M. Phillips & H. Peng, Novon 15: 473. 2005.

细小香茅 xi xiao xiang mao

Perennial. Culms tufted, wiry, 60-70 cm tall. Leaf sheaths glabrous; leaf blades narrowly linear, pale green, ca. 20×0.1 -0.2 cm, smooth, glabrous, narrowed toward base; ligule 1.3-2 mm. Spathate panicle moderately dense, up to 30 cm; spatheoles linear, reddish, 1.2-1.5 cm; racemes green, deflexed at maturity, homogamous pair reduced to 1 short narrow spikelet; rachis internodes and pedicels slenderly linear, margins ciliate with ca. 0.7 mm hairs increasing to 2-3 mm at apex, internode apex expanded, cupular, scarious, toothed. Sessile spikelet narrowly oblong, 3.8-4 mm; lower glume herbaceous, shallowly concave below middle, a short tuft of callus hairs in base of concavity, lightly keeled below middle, sharply keeled above, keels scabrid, wingless, 2-4-veined between keels above middle; upper lemma 2-lobed; awn 1.2-1.3 cm. Pedicelled spikelet narrow, 0.5-2.5 mm, reduced to the empty lower glume. Fr. Oct.

• Roadsides in grasslands; ca. 900 m. NE Yunnan.

This species is known only from the type. It shares with *Cymbopogon liangshanensis* the unusual character, not otherwise seen in Chinese species, of reduced homogamous and pedicelled spikelets.

7. Cymbopogon gidarba (Buchanan-Hamilton ex Steudel) A. Camus var. **burmanicus** Bor, J. Bombay Nat. Hist. Soc. 52: 157. 1954.

缅甸浅囊香茅 mian dian qian nang xiang mao

Perennial. Culms tufted, slender, 50–100 cm tall. Leaf sheaths glabrous; leaf blades linear, flat or folded, 18–30 × 0.2–0.5 cm, abaxial surface glabrous, adaxial surface scabrid-puberulous, sometimes with long scattered hairs, base straight, apex finely acuminate; ligule 1–2 mm. Spathate panicle sparsely branched, very lax, 15–30 cm; spatheoles linear, tightly convolute, 2–3 cm; peduncle exserted up to 1.5 cm from near spatheole apex; racemes pinkish gray, ca. 2 cm; rachis internodes and pedicels stoutly cuneate, margins shortly but densely ciliate or woolly, back pubescent or subglabrous; pedicel of homogamous pair and lowest internode swollen. Sessile spikelet narrowly lanceolate, 4–4.5 mm; lower glume deeply concave in lower 2/3, channel puberulous with a prominent swelling at base, keels rounded alongside channel, sharp and scabrid

above, wingless, 2–3-veined between keels; upper lemma 2-lobed; awn 1–1.3 cm. Pedicelled spikelet 4–5 mm.

Grassy hillsides; 1000-2200 m. Yunnan (Kaiyang) [Myanmar].

In Myanmar this grass occurs on calcareous clay soils.

Cymbopogon gidarba var. gidarba occurs on uplands in India. It has a narrower, more contracted compound panicle and shorter, 2–2.5 mm, narrowly elliptic spatheoles, with the peduncle not or only very shortly exserted from near the middle of the spatheole. The spikelets are also slightly smaller, with the sessile spikelet 3.2–4 mm.

8. Cymbopogon pospischilii (K. Schumann) C. E. Hubbard, Kew Bull. [4] 1949: 175. 1949.

喜马拉雅香茅 xi ma la ya xiang mao

Andropogon pospischilii K. Schumann, Bot. Jahrb. Syst. 24: 328. 1897; A. nardus var. stracheyi J. D. Hooker; Cymbopogon stracheyi (J. D. Hooker) Raizada & S. K. Jain.

Perennial. Culms densely tufted, wiry, erect or geniculate, 60–100 cm tall. Leaf sheaths glabrous; leaf blades narrow, folded or involute, glaucous, 15– 30×0.2 –0.3 cm, glabrous, scabrid, apex filiform; ligule ca. 1–2 mm. Spathate panicle open, 15–25 cm, raceme pairs few; spatheoles 2–3 cm; racemes 1.5–2 cm; rachis internodes and pedicels ciliate on margins, glabrous on back; pedicel of homogamous pair not swollen, oblong, free from adjacent internode. Sessile spikelet narrowly lanceolate-oblong, 4.5–6 mm; lower glume papery, concave or almost flat below middle, keels rounded below middle, sharp and scabrid above, wingless or almost so, 3–5-veined between keels above middle; upper lemma 2-lobed; awn 1.4–1.8 cm. Pedicelled spikelet 4.5–6 mm. Fl. and fr. Jul–Dec. 2n = 20, 40.

Mountain slopes, mixed forests, valleys; 1600–3000 m. Xizang, Yunnan [NW India, Nepal, Pakistan; Africa, SW Asia (S Arabia)].

9. Cymbopogon citratus (Candolle) Stapf, Bull. Misc. Inform. Kew 1906: 357. 1906.

香茅 xiang mao

Andropogon citratus Candolle, Cat. Pl. Horti Monsp. 78. 1813.

Perennial, shortly rhizomatous. Culms tufted, robust, up to 2 m tall, ca. 4 mm in diam., farinose below nodes. Leaf sheaths glabrous, greenish inside; leaf blades glaucous, $30–90\times0.5–2$ cm, both surfaces scabrid, base gradually narrowed, apex long acuminate; ligule ca. 1 mm. Spathate compound panicle large, lax, up to 50 cm, drooping, branches slender; spatheoles reddish or yellowish brown, 1.5–2 cm; racemes 1.5–2 cm; rachis internodes and pedicels 2.5–4 mm, loosely villous on margins; pedicel of homogamous pair not swollen. Sessile spikelet linear-lanceolate, $5–6\times ca.~0.7$ mm; lower glume flat or slightly concave toward base, sharply 2-keeled, keels wingless, scabrid, veinless between keels; upper lemma narrow, entire and awnless, or slightly 2-lobed with ca. 0.2 mm mucro. Pedicelled spikelet 4–5 mm. Fl. and fr. summer. 2n=40.

Commonly cultivated. Fujian, Guangdong, Guizhou, Hainan, Hubei, Taiwan, Yunnan, Zhejiang [origin unknown; cultivated in tropical Asia and elsewhere].

This species (Lemon Grass), known only from cultivation, is

grown on a large scale in parts of tropical Asia and South America for the lemon-scented oil extracted from its leaves. The oil is used for both medicinal and culinary purposes. Flowers are seldom produced.

10. Cymbopogon nardus (Linnaeus) Rendle in Hiern, Cat. Afr. Pl. 2: 155. 1899.

亚香茅 ya xiang mao

Andropogon nardus Linnaeus, Sp. Pl. 2: 1046. 1753.

Perennial from a stout rootstock. Culms tufted, robust, up to 2.5 m tall, 1–2 cm in diam. Leaf sheaths reddish purple at base, smooth, glabrous; leaf blades dark green or dark brown when dry, drooping for 1/3 of their length, 30– 100×1 –2 cm, glabrous, abaxial surface scabrid, adaxial surface smooth, base narrow, apex long acuminate; ligule 2–3 mm. Spathate panicle large, narrow, congested, interrupted, 60–90 cm; spatheoles reddish brown, 1.2–2.5 cm; racemes 1–1.5 cm; rachis internodes and pedicels ciliate on margins; pedicel of homogamous pair not swollen. Sessile spikelet oblong-lanceolate, 3– 4.5×1 –1.2 mm; lower glume flat or slightly concave, reddish brown or purplish upward, sharply 2-keeled, keels narrowly winged, obscurely 0–3-veined between keels; upper lemma linear, entire or slightly 2-lobed, mucronate or very shortly awned. Pedicelled spikelet 3.5–7 mm. Fl. and fr. Nov–Apr. 2n = 40.

Commonly cultivated. Fujian, Guangdong, Hainan, Taiwan, Yunnan [native to S India and Sri Lanka; introduced elsewhere as a crop plant].

This species yields citronella oil.

11. Cymbopogon winterianus Jowitt ex Bor, Oesterr. Bot. Z. 112: 185, 1965.

枫茅 feng mao

Perennial from a shallowly rooted rhizome. Culms tufted, robust, up to 2 m or more tall. Leaf sheaths glabrous, reddish inside; leaf blades relatively thin, drooping for 2/3 of their length, $40-80(-100) \times 1-1.5(-2.5)$ cm, abaxial surface glaucous, adaxial surface light green, margins scabrid, base narrow, apex long acuminate; ligule 2–3 mm. Spathate compound panicle large, lax, up to 50 cm, much branched, main axis zig-zag, finally nodding; spatheoles reddish brown, 1.2-2.5 cm; racemes 1.5-2.5 cm; rachis internodes and pedicels softly ciliate on margins; pedicel of homogamous pair not swollen. Sessile spikelet elliptic-lanceolate, $4-5 \times ca$. 1 mm; lower glume flat or slightly concave, sharply 2-keeled, keels narrowly winged, 3-veined between keels; upper lemma very shortly 2-lobed, awn short or absent, not exserted from spikelet. Pedicelled spikelet 3.5-5 mm. 2n = 20, 40.

Commonly cultivated. Guangdong, Hainan, Sichuan, Yunnan [origin unknown; cultivated mainly in Indonesia].

This species, known only from cultivation, produces citronella oil of a higher quality than that from *Cymbopogon nardus*.

12. Cymbopogon distans (Nees ex Steudel) Will. Watson in E. T. Atkinson, Himalayan Districts N.W. Prov. India, 392. 1882.

芸香草 yun xiang cao

Andropogon distans Nees ex Steudel, Syn. Pl. Glumac. 1: 387. 1854; A. nardus Linnaeus var. distans (Nees ex Steudel) Hackel.

Perennial, shortly rhizomatous with age; basal sheaths closely overlapping in tight bundles, not curling. Culms densely tufted, erect or ascending, tinged purple, 50-100 cm tall, nodes glabrous. Leaf sheaths glabrous; leaf blades narrowly linear to filiform, flexuous, 10-50 × 0.15-0.3 cm, glaucous, glabrous, margins scabrid; ligule 2-3 mm. Spathate compound panicle narrow, open, 15-30 cm, usually simple, rarely with second tier of branching, raceme pairs few; spatheoles gray-green, 2-3.5 cm; racemes 2-3.5 cm; rachis internodes and pedicels 2-3 mm, margins densely ciliate with white soft hairs up to 3 mm; pedicel of homogamous pair not swollen. Sessile spikelet linear-lanceolate, $(6-)7-8 \times 0.8-1.2$ mm; lower glume flat or shallowly concave in lower part with 1–2 transverse wrinkles, sharply 2keeled throughout, keels wingless or narrowly winged, wings 0.15-0.25 mm, 2-4-veined between keels in upper part, apex long acuminate, 2-toothed; upper lemma 2-lobed; awn 1.5-2 cm. Pedicelled spikelet 5–9 mm. Fl. and fr. Jun–Oct. 2n = 20,

Mountain slopes, valleys, open grassy places; 2000–3500 m. S Gansu, Guizhou, Shaanxi, Sichuan, Xizang, Yunnan [NW India, Nepal, Pakistan].

Aromatic oils are extracted from this species for medicinal and industrial purposes.

13. Cymbopogon nervosus B. S. Sun, J. Yunnan Univ. 21: 95. 1999

多脉香茅 duo mai xiang mao

Perennial, shortly rhizomatous; basal sheaths papery, pale brown, slightly curling. Culms tufted, 50–120 cm tall, 2–3 mm in diam., nodes glabrous. Leaf sheaths glabrous; leaf blades linear, 10– 20×0.4 –0.7 cm, glabrous, margins scabrid, base rounded, apex acuminate to a setaceous point; ligule 1–3 mm. Spathate compound panicle narrow, lax, 20–30 cm, 1–3 tiers of branching; spatheoles green or tinged purple, 3–3.5 cm; racemes greenish or dark purple, 2.5–3.3 cm; rachis internodes and pedicels ca. 3.5 mm, margins ciliate; pedicel of homogamous pair not swollen. Sessile spikelet narrowly obovate, 5.8– 6.5×1.5 –1.7 mm; lower glume flat or shallowly concave in lower part, transversely wrinkled, sharply 2-keeled throughout, keels winged above middle, wings 0.25–0.4 mm, 5–7-veined between keels; upper lemma 2-lobed; awn ca. 1.5 cm. Pedicelled spikelet 6–6.3 mm. Fl. Aug.

• Mountain slopes; ca. 2500 m. Yunnan.

There is very little besides the lack of red coloration in the basal sheaths and a more wrinkled sessile spikelet to distinguish this taxon from *Cymbopogon goeringii*. It occurs at higher elevations.

14. Cymbopogon tortilis (J. Presl) A. Camus, Rev. Bot. Appl. Agric. Colon. 5: 206. 1925.

扭鞘香茅 niu qiao xiang mao

Anthistiria tortilis J. Presl in C. Presl, Reliq. Haenk. 1: 347. 1830; Andropogon hamatulus Hooker & Arnott; A. nardus Linnaeus subsp. hamatulus (Hooker & Arnott) Hackel; Cymbopogon hamatulus (Hooker & Arnott) A. Camus; C. jinshaensis R. Zhang & C. H. Li; C. nardus (Linnaeus) Rendle subsp. hamatulus (Hooker & Arnott) Rendle.

Perennial from a short rootstock; basal sheaths reddish brown inside, lax, curling when dry. Culms tufted, slender, 50-150 cm tall, 2-4 mm in diam., nodes glabrous or pubescent, often farinose. Leaf sheaths smooth, glabrous, leaf blades linear, 25-60 × 0.2-0.7 cm, glabrous, margins scabrid, base gradually narrowed, apex finely acuminate; ligule 2-3(-6) mm. Spathate compound panicle narrow or somewhat spreading, 20-35 cm, 2-3 tiers of branching; spatheoles reddish brown, 1.2-1.5 cm; racemes 1-1.5 cm; rachis internodes and pedicels 1.5-2 mm, margins ciliate; pedicel of homogamous pair not swollen. Sessile spikelet narrowly lanceolate-oblong, $3.5-4.5 \times 0.9-1.2$ mm; lower glume flat, smooth or slightly wrinkled, sharply 2-keeled throughout, keels narrowly winged above middle, wings 0.15-0.25 mm wide, (2-)3(-5)-veined between keels; upper lemma 2-lobed; awn 0.7-1 cm. Pedicelled spikelet 3-3.5 mm. Fl. and fr. Jul-Oct. 2n = 20.

Grassy places on light dry soils; below 600 m. S Anhui, Fujian, Guangdong, Guizhou, Hainan, Taiwan, Yunnan, Zhejiang [Philippines, Vietnam].

15. Cymbopogon goeringii (Steudel) A. Camus, Rev. Bot. Appl. Agric. Colon. 1: 286. 1921.

橘草 ju cao

Andropogon goeringii Steudel, Flora 29: 22. 1846; A. nardus Linnaeus var. goeringii (Steudel) Hackel; Cymbopogon goeringii var. hongkongensis Soenarko; C. nardus (Linnaeus) Rendle var. goeringii (Steudel) Rendle; C. tortilis (J. Presl) A. Camus subsp. goeringii (Steudel) Koyama; C. tortilis var. goeringii (Steudel) Handel-Mazzetti.

Perennial; basal sheaths orange inside, lax, curling when dry. Culms tufted, slender, 50-100 cm tall, 1-2.5 mm in diam., nodes glabrous or puberulous, often farinose. Leaf sheaths smooth, glabrous; leaf blades linear, 15-40 × 0.3-0.5 cm, glabrous, margins scabrid, base gradually narrowed, apex finely acuminate; ligule 1-3(-4.5) mm. Spathate compound panicle narrow, 15-30 cm, 2 tiers of branching; spatheoles 1.5-2.2 cm; racemes often purplish, (1.3-)1.5-2 cm, rachis internodes and pedicels 2-3.5 mm, margins ciliate; pedicel of homogamous pair not swollen. Sessile spikelet narrowly obovate, 4.5-6 × 1.2-1.7 mm; lower glume flat or slightly concave toward base, smooth or slightly wrinkled, sharply 2-keeled throughout, keels broadly winged above middle, wings 0.25-0.45 mm wide, (1-) 3-5-veined between keels; upper lemma 2-lobed; awn (0.8-)1-2 cm. Pedicelled spikelet 4–6.5 mm. Fl. and fr. Jul–Oct. 2n =20.

Grassy slopes, roadsides; below 1500 m. Anhui, Fujian, Guizhou, Hebei, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Shandong, Taiwan, Yunnan, Zhejiang [Japan, S Korea].

Cymbopogon goeringii and C. tortilis form an intergrading complex, and the former species is sometimes treated at infraspecific rank under the latter. Cymbopogon goeringii tends to have a slightly more northern distribution and can usually be distinguished by its longer racemes of larger, often purplish spikelets.

A local variant in Hong Kong has racemes, spikelets, and awns at the lower end of the size range, perhaps due to introgression from *Cymbopogon tortilis*, but has the obovate lower glume and broadly winged keels of *C. goeringii*. It has been distinguished as var. *hongkongensis*, but scarcely merits separate status.

The name "Cymbopogon eugenolatus L. Liu" (Fl. Reipubl. Popularis Sin. 10(2): 206. 1997) has been applied to another variant with intermediate measurements, but was not validly published because no Latin description was provided. The specimen on which it was based has not been seen.

16. Cymbopogon tungmaiensis L. Liu, Fl. Xizang. 5: 331. 1987

通麦香茅 tong mai xiang mao

Perennial. Culms densely tufted, erect, 1-1.5 m tall, 2-7 mm in diam., nodes glabrous. Leaf sheaths glabrous; leaf blades narrowly linear, $20-40 \times 0.2-0.3(-0.6)$ cm, adaxial surface scabrid, abaxial surface scabrid, puberulous at narrow base; ligule 1-2 mm. Spathate compound panicle 20-50 cm, simple or with second tier of branching; spatheoles 2-5 cm; racemes 2-3 cm, base swollen. Sessile spikelet elliptic, ca. 6×1.3 mm; lower glume concave along midline, keels winged above middle, wings 0.2-0.5 mm wide, margins scabrid, 2-4-veined between keels; upper lemma awned; awn ca. 1.5 cm. Pedicelled spikelet ca. 0.6 cm. Fl. and fr. Jul-Oct.

Valleys; 2000–2500 m. SW Sichuan, Xizang (Tungmai), NW Yunnan.

This species is known only from the type, which has not been seen

17. Cymbopogon fibrosus B. S. Sun, J. Yunnan Univ. 21: 95. 1999

纤鞘香茅 xian qiao xiang mao

Perennial; old basal sheaths fibrous. Culms tufted, 0.5-1 m tall, 3-4 mm in diam., nodes glabrous. Leaf sheaths glabrous; leaf blades narrowly linear, flat or folded, $50-70\times0.3-0.5$ cm, scabrid, base narrowed to midrib, apex filiform; ligule 2-3 mm. Spathate compound panicle ca. 30 cm, slightly dense, 2-3 tiers of branching; spatheoles 2.5-2.8 cm; racemes green, 1.7-2 cm; rachis internodes and pedicels ciliate along margins with 0.5-1.5 mm hairs; pedicel of homogamous pair not swollen. Sessile spikelet oblong-lanceolate, $4.8-5.3\times1-1.1$ mm; lower glume concave in lower half, smooth or slightly transversely wrinkled, sharply 2-keeled throughout, keels winged above middle, wings 0.15-0.2 mm wide, 2-3-veined between keels; upper lemma awned; awn ca. 10 mm. Pedicelled spikelet 4.7-5 mm. Fl. Oct.

• Mountain slopes. SW Sichuan, SE Yunnan.

18. Cymbopogon pendulus (Nees ex Steudel) Will. Watson in E. T. Atkinson, Himalayan Districts N.W. Prov. India, 392. 1882.

垂序香茅 chui xu xiang mao

Andropogon pendulus Nees ex Steudel, Syn. Pl. Glumac. 1: 388. 1854.

Perennial from short rhizome. Culms tufted, robust, up to 3 m tall, 8–12 mm in diam., nodes glabrous. Leaf sheaths glabrous, auricles to 3 mm at mouth; leaf blades linear, glaucous, up to 100×0.7 –1.5 cm, glabrous, margins scabrid, base gradually narrowed, apex filiform; ligule ca. 2 mm. Spathate compound panicle rather lax, decompound, yellowish tinged pale red, up to 1 m, branches drooping, clusters of racemes

dense; spatheoles pale reddish brown, 2–3 cm; racemes 1.5-2.2 cm; rachis internodes and pedicels densely ciliate; pedicel of homogamous pair not swollen. Sessile spikelet narrowly oblong, $5-6\times 1-1.4$ mm; lower glume concave in lower 2/3, not wrinkled, sharply 2-keeled throughout, keels narrowly winged above middle, wings 0.15-0.35 mm, obscurely 2–4-veined between keels toward apex, midvein often absent; upper lemma awned; awn 1-1.7 cm. Pedicelled spikelet 5-6 mm.

Stream banks. Yunnan [Bhutan, NE India, Nepal].

This species has a lemon scent. Outside China it occurs on dry, grassy hillsides below 2000 m. It intergrades with *Cymbopogon flexuosus* and *C. khasianus*, but can usually be recognized by the relatively long, narrow, channeled lower glume of the sessile spikelet.

19. Cymbopogon xichangensis R. S. Zhang & B. S. Sun, J. Pl. Res. Environm. 2(2): 40. Fig. 2. 1993.

西昌香茅 xi chang xiang mao

Perennial. Culms tufted, robust, up to 2.5 m tall, 3–5 mm in diam., nodes glabrous. Leaf sheaths glabrous; leaf blades linear, up to 60×0.5 –1.2 cm; ligule ca. 1.5 mm. Spathate compound panicle very large, open, 80–180 cm, branches lax, drooping, spathes not densely clustered; spatheoles reddish at maturity; racemes 3–4 cm; rachis internodes and pedicels ciliate on margins; pedicel of homogamous pair not swollen. Sessile spikelet elliptic, 7–9 mm; lower glume flat, sharply 2-keeled throughout, keels broadly winged above middle, 2–5-veined between keels; upper lemma awned; awn ca. 1.2 cm. Pedicelled spikelet linear-lanceolate. Fl. and fr. Sep.

• Grasslands; ca. 2000 m. Sichuan (Xichang).

20. Cymbopogon traninhensis (A. Camus) Soenarko, Reinwardtia 9: 347. 1977.

横香茅 heng xiang mao

Cymbopogon confertiflorus (Steudel) Stapf var. traninhensis A. Camus, Bull. Mus. Natl. Hist. Nat. 26: 565. 1920; C. khasianus (Munro ex Hackel) Stapf ex Bor var. nagensis Bor.

Perennial. Culms tufted, 1.5-2 cm tall, ca. 5 mm in diam., nodes glabrous or pubescent. Leaf sheaths glabrous or pubescent at base above node; leaf blades linear, up to $75 \times 1 - 1.3$ cm, abaxial surface bearded at sheath junction, otherwise glabrous, margins scabrid, base gradually narrowed, apex finely acuminate; ligule 3-6 mm. Spathate compound panicle narrow, erect or slightly spreading, usually purplish, ca. 50 cm or more, branched several times, spathes in lax clusters; spatheoles 1-2 cm; racemes 2-2.5 cm; rachis internodes and pedicels ciliate on margins; pedicel of homogamous pair not swollen. Sessile spikelet narrowly obovate, $5.5-7 \times 1-1.5$ mm; lower glume flat or shallowly concave below middle, frequently pubescent in depression, often transversely wrinkled, sharply 2-keeled throughout, keels winged above middle, wings 0.3-0.5 mm wide, 2-5veined between keels; upper lemma awned; awn 1-2 cm. Pedicelled spikelet 5-5.5 mm.

Dry rocky or grassy hill slopes. Yunnan [NE India, Laos, Myanmar, N Thailand].

This species is very close to *Cymbopogon khasianus*, with the erect, purplish compound panicle typical of that species, but has slightly

longer, more broadly winged spikelets.

21. Cymbopogon microstachys (J. D. Hooker) Soenarko, Reinwardtia 9: 364. 1977.

细穗香茅 xi sui xiang mao

Andropogon nardus Linnaeus var. microstachys J. D. Hooker, Fl. Brit. India 7: 207. 1896 ["1897"]; Cymbopogon flexuosus (Nees ex Steudel) Will. Watson var. microstachys (J. D. Hooker) Bor.

Perennial from a stout rootstock. Culms fairly slender to robust, 1.5-2 m tall, up to 1 cm in diam., nodes glabrous. Leaf sheaths glabrous, shortly auriculate; leaf blades linear, glaucous, 40-75 × 1-1.2 cm, glabrous, scabrid, base narrowed nearly to midrib on lower blades, apex finely acuminate; ligule 5-6 mm. Spathate compound panicle narrow or somewhat spreading, decompound, yellowish green or tinged purplish, up to 60 cm or more, branches lax, raceme pairs not densely clustered; spatheoles narrowly elliptic, 1-1.5 cm; racemes 1-1.3 cm; rachis internodes and pedicels pilose on margins; pedicel of homogamous pair not swollen. Sessile spikelet narrowly lanceolateoblong, 3.5-4 × ca. 0.8 mm; lower glume flat or shallowly concave below middle, frequently slightly transversely wrinkled, sharply 2-keeled throughout, keels scarcely winged, wings not more than 0.1 mm wide, obscurely 1-3-veined between keels or veinless; upper lemma awned; awn 0.6-0.8 cm. Pedicelled spikelet 3–4 mm. Fl. and fr. Aug–Oct. 2n = 30.

Rocky hill slopes, forest margins; ca. 1200 m. S Yunnan [India, Myanmar, Thailand].

This species is part of the complex centered around *Cymbopogon khasianus* and is distinguished mainly by its small racemes and spikelet parts.

22. Cymbopogon flexuosus (Nees ex Steudel) Will. Watson in E. T. Atkinson, Himalayan Districts N.W. Prov. India, 392. 1882.

曲序香茅 qu xu xiang mao

Andropogon flexuosus Nees ex Steudel, Syn. Pl. Glumac. 1: 388. 1854; A. nardus Linnaeus var. flexuosus (Nees ex Steudel) Hackel.

Perennial from a short stout rhizome. Culms robust, up to 3 m tall, 1-2 cm in diam., nodes glabrous or pubescent. Leaf sheaths glabrous, auricles often present; leaf blades linear, up to 100 × 1.5 cm, scabrid, abaxial surface tomentose at sheath junction, adaxial surface pilose at base, otherwise glabrous, base gradually narrowed, apex filiform; ligule 2-5 mm. Spathate compound panicle very large, lax, decompound, grayish green, up to 60 cm or more, nodes bearded, branches numerous, drooping; spatheoles 1–2 cm; racemes 1–1.7 cm; rachis internodes and pedicels ciliate on margins; pedicel of homogamous pair not usually swollen. Sessile spikelet narrowly elliptic-oblong, $4-4.5 \times 0.8-1$ mm; lower glume flat or shallowly concave, usually slightly transversely wrinkled, sharply 2-keeled throughout, keels narrowly winged, wings 0.1 mm wide or less, obscurely 3-veined between keels; upper lemma awned; awn 0.8-1 cm. Pedicelled spikelet 3.5-4 mm. Fl. and fr. summer to autumn. 2n = 20, 40.

Grassy slopes; below 1000 m. SW Yunnan [probably native to In-

dia; naturalized in Indonesia, Malaysia, Myanmar, Nepal, and Thailand].

This grass is cultivated in tropical regions for "oil of lemon grass." It is thought to be native to India, but is now widely naturalized in Indonesia and elsewhere. It is usually easily recognizable by its very large compound panicle of drooping branches, with numerous short, deflexed racemes of small, narrowly winged spikelets. In Bhutan and NE India the branches are looser with more widely spaced raceme pairs than usual, approaching *Cymbopogon pendulus* in habit. This form has been recognized as *C. flexuosus* var. *sikkimensis* Bor.

23. Cymbopogon khasianus (Munro ex Hackel) Stapf ex Bor, Indian Forest Rec., Bot. 1: 92. 1938.

卡西香茅 ka xi xiang mao

Andropogon nardus Linnaeus var. khasianus Munro ex Hackel in A. Candolle & C. Candolle, Monogr. Phan. 6: 603. 1889

Perennial from a stout rootstock. Culms fairly slender to robust, up to 2 m tall, 3-6 mm in diam., nodes purple, glabrous, or puberulous to tomentose with creamy hairs. Leaf sheaths glabrous or basal part above node pubescent, auricles to 6 mm at mouth; leaf blades linear, slightly glaucous or sometimes purplish, $40-60 \times 0.7-1$ cm, abaxial surface usually tomentose at sheath junction, otherwise glabrous, base gradually narrowed, apex filiform; ligule 1.5-4 mm. Spathate compound panicle narrow, erect, decompound, often purplish, ca. 50 cm or more, much branched, spathate compound clusters dense; spatheoles 1.2–2 cm; racemes 1.2–1.5(–2) cm; rachis internodes and pedicels ciliate on margins, hairs ca. 1.5 mm; pedicel of homogamous pair not swollen. Sessile spikelet elliptic-oblong, 4–5 × 0.9– 1.2 mm; lower glume flat or shallowly concave below middle, occasionally puberulous in depression, often transversely wrinkled, sharply 2-keeled throughout, keels winged above middle, wings 0.1-0.3 mm wide, (2-)5(-7)-veined between keels; upper

lemma awned; awn 0.8-1.1 cm. Pedicelled spikelet 3-5 mm. Fl. and fr. Sep-Nov. 2n = 60.

Hill slopes, forest margins; 800–2000 m. Guangxi, Yunnan [Bhutan, India, Myanmar, N Thailand].

This is a variable species intergrading with several related species, including *Cymbopogon flexuosus*, *C. microstachys*, and *C. pendulus*. *Cymbopogon khasianus* can be recognized by its erect, often purplish compound panicle and sessile spikelets with a wrinkled, winged, several-veined lower glume. The wing width and number of veins can vary even within the same panicle.

24. Cymbopogon auritus B. S. Sun, J. Yunnan Univ. 21: 95. 1999.

长耳香茅 chang er xiang mao

Perennial. Culms robust, ca. 1.2 m tall, ca. 6 mm in diam., nodes pubescent. Leaf sheaths glabrous, auriculate, auricles broadly lanceolate, ca. 10 mm; leaf blades linear-lanceolate, papery, ca. 50 × 1.6 cm, smooth, glabrous, abaxial surface glaucous, pubescent at sheath junction, adaxial surface green, base gradually narrowed, apex finely acuminate; ligule 6-7 mm. Spathate compound panicle ca. 50 cm, open, branches elongate, erect or drooping, spathes not clustered; spatheoles light reddish, 1.8-2 cm; racemes yellow-green, 1.3-1.8 cm; rachis internodes and pedicels ca. 3 mm, ciliate on margins; pedicel of homogamous pair not swollen. Sessile spikelet narrowly elliptic, ca. 5 × 1.3 mm; lower glume shallowly concave below middle, transversely wrinkled, sharply 2-keeled throughout, keels winged above middle, wings 0.15-0.3 mm wide, 4-6-veined between keels; upper lemma awned; awn 0.9-1 cm. Pedicelled spikelet 4-4.5 mm. Fl. Jun.

• Grassy slopes; ca. 1000 m. W Yunnan.

This taxon is closely related to *Cymbopogon khasianus*, but has broader leaf blades and longer sheath auricles.

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